FORUM

Time to Act

The 1998 report by the U.S. Department of Agriculture's National Commission on Small Farms, "A Time to Act," recommends that by 2002, at least two-thirds of our agency's research be geared toward strengthening small farms.

That makes sense, because 94 percent of U.S. farms are small—under $250,000 in gross annual income. While that sounds like a lot of money at first glance, a second look proves an eye-opener. An average farm with annual gross sales between $50,000 and $250,000 has a net cash income of only $23,159. That's because over 80 percent of a farmer's gross sales are absorbed by farming expenses.

And that's the reason so many farmers rely on nonfarm jobs as their primary source of income, as does Lonnie Burns, who raises calves in West Virginia. (See "Diversifying Helps Small Farms Thrive" on page 4.)

Agricultural Research Service scientists in Beaver, West Virginia, who work with Lonnie and his father, Lloyd, and their neighbors, are a sterling example of our intensified efforts to aid farm families. The Beaver lab's name was recently changed from the Appalachian Soil and Water Conservation Laboratory to the Appalachian Farming Systems Research Center to reflect the lab's new focus on small farm research.

The Beaver center's vision for small farms mirrors that of the report. Scientists there build on area farmers' skilled labor and ingenuity, as well as on the diverse natural landscape. They are helping farmers develop niche market products, taking advantage of small farms' ability to respond more easily than larger operations to a narrow consumer base.

In 1997, the ARS lab in Booneville, Arkansas, was renamed the Dale Bumpers Small Farm Research Center because we recognized that small farms offer a biological diversity and ecological resilience not found in larger, monocropping operations. When they sell their crops in farmers' markets, they provide urban people with a social connection to farmers and a healthy, fresh food supply.

The Dale Bumpers center demonstrates that large-scale agriculture is not and should not be our only model for agricultural production, but that multiple and diverse models are necessary for economic, ecological, and social stability in our food and agricultural system.

That is why we are developing methods that are more knowledge- and management-intensive but less capital-intensive. A good example of this appears in the story "Model Takes the Guesswork Out of Fertilizing" on page 15.

Alan E. Olness has eliminated the need for a second nitrate soil test during the growing season. This could save farmers several hundreds of dollars in soil-sampling costs—not counting their savings from higher yields and potential reductions in nitrogen fertilizer use.

Fred Magdoff, a professor at the University of Vermont, invented one of the tests that Olness uses, the Pre-Sidedress Nitrate Test, which promises to solve major economic and environmental problems for farmers. Magdoff has interacted with a variety of ARS scientists for the past two decades, most recently while working on the USDA Small Farms Commission. We plan to work closely with Magdoff to implement "A Time to Act."

Magdoff says that "Olness is enhancing the use of newer nitrate tests as management tools. By reducing the number of soil samples needed, he can save all farmers money."

Magdoff believes that while ARS has generally done a tremendous job helping all farmers and that farm size is not always an issue, some of ARS research has not been favorable to small farms. He feels that the most useful work should be expanded and that there are areas where ARS can redirect its research to be even more helpful to small farmers.

He cites the work of ARS entomologist W. Joe Lewis in Tifton, Georgia, as an example of the type of research that is helpful to small farms and should be expanded to other parts of the country.

Lewis and colleagues are engaged in farm-scaping; that is, designing an entire farm with an eye to keeping down pest numbers and thus reducing pesticide needs. They view the entire farm as a single diverse garden, making landscaping decisions on, for example, whether and where to use perennials and choosing flowers that attract beneficial insects.

"This research is critical to small farms," Magdoff says, "but there's no profit in it for private industry. Only the state universities and ARS would do this—and only ARS has the national network to do it for each region."

Magdoff also cites the work of ARS scientists Aref Abdul-Baki and John R. Teasdale in Beltsville, Maryland. They have shown that a hairy vetch legume cover crop can reduce fertilizer, pesticide, and water use in growing tomatoes and other crops.

"The implications of their work are gradually dawning on the farming world, and more and more farmers are using their techniques—saving money and helping the environment at the same time," says Magdoff.

ARS managers are inventorying the agency's research portfolio as part of an effort to strengthen small farm research. We must be sure that we include appropriate technologies.

The USDA's Economic Research Service is studying successful small farms to identify the principles responsible for their success. The agency is also doing market surveys. We and USDA's Cooperative State Research, Education, and Extension Service will use the ERS results to identify technological models that work for small farms and afford future market opportunities.

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